A Qualitative Study of Student-Centered Learning Practices in New England High Schools

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Background and Purpose

In early 2015, the Nellie Mae Education Foundation (NMEF) contracted with the UMass Donahue Institute (UMDI) to conduct a qualitative study examining the implementation of student-centered learning (SCL) practices in select public high schools in New England. This study extends lines of inquiry explored through a prior (2014) project that UMDI conducted for NMEF. The 2014 study employed survey methodology to examine the prevalence of student-centered practices in public high schools across New England. The present study builds upon the investigation, using a variety of qualitative methods to further probe the richness and complexity of SCL approaches in use across the region. Specifically, this study was designed to address what student-centered practices "look like" in an array of contexts. The study also addresses the perceived impacts that SCL approaches have on students, staff, and schools. Additionally, it highlights the broad array of factors within and beyond school walls that reportedly foster and challenge the implementation of SCL practices. This study seeks to help NMEF understand the intricacies of SCL and provides strategic considerations for how Nellie Mae can promote the adoption and development of student-centered practices in the region.

Nellie Mae organizes student-centered learning by four tenets: (1) learning is personalized; (2) learning is competency-based; (3) learning takes place anytime, anywhere; and (4) students take ownership.[1]

Specifically, the study addresses five research questions:

1. What are the characteristics of student-centered practices in relation to the four SCL tenets? How are SCL approaches implemented?
2. What are the salient contextual factors (e.g., systems, structures, policies, procedures) associated with the implementation of SCL practices? How do they support, impede, and otherwise shape the adoption, development, and implementation of SCL approaches?
3. How are schools with moderate and high levels of SCL implementation organized to foster SCL practices?[2] What mechanisms are in place to promote student-centered learning?
4. What is the role of SCL approaches in schools and classrooms? In what ways, if at all, are they embedded in the goals and practices of schools and classrooms?
5. What is the quality of SCL instructional practices in study schools?[3] What relationships, if any, do administrators and educators perceive between these approaches and student learning?

Methodology

The study employed a range of data collection and analysis strategies to probe multiple constituents' perspectives on their experience adopting and implementing SCL practices. Key study phases are described below.

Sampling

The study targeted public New England high schools with robust implementation of student-centered practices. The sample frame for the study consisted of 367 New England public high schools, charter schools, and Massachusetts Innovation Schools[4] that completed the SCL principal survey administered by UMDI in 2014, as well as three schools that did not take the survey, but were identified by NMEF as potentially having robust student-centered practices. Sampling methods were employed to ensure that schools for the present study reflected diversity in terms of geography (state), school size, socioeconomic status, and school type (e.g., charter/non-charter).

Using results from the SCL principal survey, UMDI assigned schools overall SCL implementation scores, as well as tenet-specific scores. This was accomplished by mapping each of the items on the survey to the four tenets of student-centered learning. Scores for each tenet ranged from 0% to 100%. Each school was assigned an overall score by averaging its four tenet-specific scores.

Within each New England state, the eight schools with the highest overall SCL implementation scores were selected for the sample. This generated an initial pool of 48 schools, which exhibited overall SCL implementation scores ranging from 59% to 83%. For each school with a low score[5] in one or more SCL tenets, the school from the same state with the next highest overall SCL implementation score was added to the sample. This produced a sample of 53 schools.

[1] http://www.nmefoundation.org/our-vision

[2] Schools that received a score of 75% or higher on the principal SCL survey were designated as having high SCL implementation levels. Schools with scores between 50% and 75%on the survey were labeled as having moderate SCL implementation levels.

[3] "Study schools" refers to the 12 schools and their districts from which data were collected. "Site visit schools" refers to the six schools where site visits were conducted.

[4] The sample frame did not include alternative, special education, vocational, or virtual schools, which operate in substantively different contexts than the vast majority of public high schools.

[5] Low scores were considered below 50% for tenets 1, 2 or 4 and below 25% for tenet 3. A lower threshold was used for tenet 3 as scores were generally substantially lower for that tenet.

At that point, the pool contained only 10 large schools (more than 1,000 students) and eight schools that were categorized as high poverty (more than 66% of students qualifying for free or reduced-price lunch). To compensate for this underrepresentation, the 10 large schools with the next highest SCL implementation scores were added to the sample.

Then the four high poverty schools with the next highest scores were added.

Finally, NMEF submitted a list of 15 schools that they believed to be leaders in SCL implementation. Of these:

- Six schools were already in the sample
- Three schools that scored between 50% and 75% on the SCL principal survey were added to the sample
- Three schools where principals had not completed a survey were added to the sample

Table 1. Sample Schools by State	
State	Number
CT	13
MA	17
ME	13
NH	9
RI	10
VT	11
Total	**73**

- Two schools that scored below 50% on the survey were not added to the sample
- One vocational school was not added to the sample

In total, there were 73 schools in the sample, 21 of which were large and 12 of which were high poverty. The distribution by state is displayed in Table 1.

The overall SCL implementation scores of these schools ranged from 51% to 83%. Six schools had scores greater than 75%.

Study invitations and overviews were sent to all 73 schools to gauge their interest in study participation and 18 schools expressed interest in the study. Subsequently, 12 schools were selected for participation in consultation with NMEF based on SCL score, state, size, poverty level, and school type.

Data Collection

Initial interviews were conducted with principals from the 12 selected schools and the district superintendents that oversee them. Data from these interviews were then analyzed to gauge the prevalence of student-centered practices in place at each school. UMDI, in consultation with NMEF, selected six schools for site visits based on the reported degree of SCL practices in place and the aforementioned variables of interest.

Day-long site visits were conducted by two UMDI staff members at the six site visit schools. These consisted of semi-structured interviews with school leaders and department heads, teacher focus groups, and classroom observations. A classroom observation tool was developed by UMDI, with guidance from NMEF, to provide field-based examples of practice. Semi-structured debriefing sessions were conducted with observed teachers.

Analysis

Analysis consisted of reviewing and summarizing all field notes, completed classroom observation tools, and audio recordings from initial interviews and site visits. These summaries were then coded, sorting data and initial gleanings into categories. The coding process triangulated data across sites. Analytic memos were generated to capture emerging patterns and themes in the data. A team of two researchers reviewed all memos, codes, and the data and notes within them to identify key findings. These findings, and evidence to support them, are presented in this report.

Data Management and Confidentiality

In this report, identifiers for schools, districts, and individuals, including superintendents, principals, teachers, and other school staff, have been removed. Given the small number of schools that participated in the study and the context-dependent nature of the findings, claims to confidentiality are nonetheless limited. All study participants were informed of the limits to confidentiality throughout the study.

Limitations

Qualitative inquiry such as this study generates context-dependent knowledge, such that findings are not assumed to be widely generalizable. Rather, the reflections and insights offered by study participants reflect specific conditions relative to state, location, school size, population, or other factors. Attention to context is warranted if the study's findings are considered for broader application.

The study does not attempt to measure the impact of SCL practices on students or gains in student learning that may be associated with the implementation of SCL approaches.

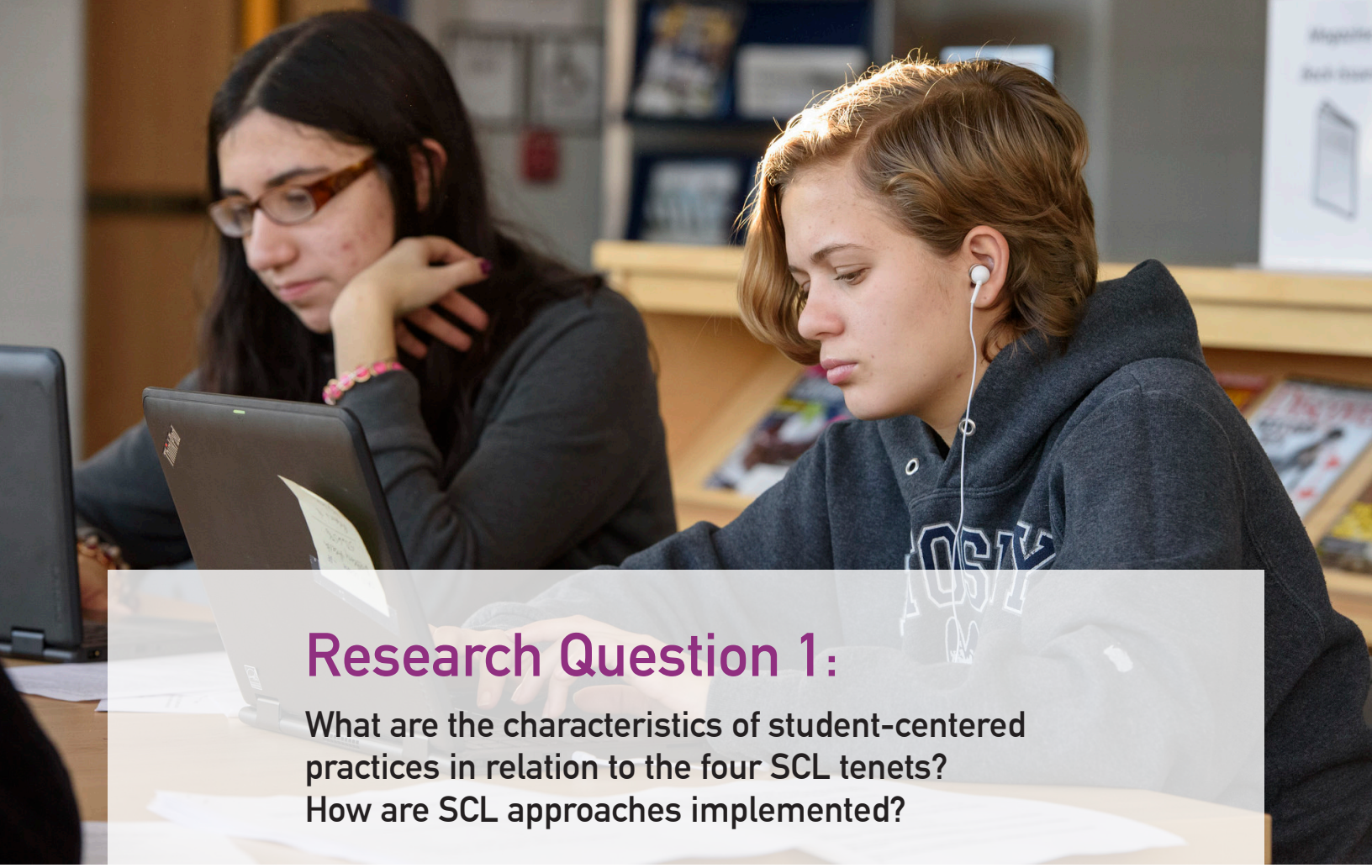
Findings

This section presents findings by research question, beginning with an examination of characteristics of SCL tenets across study schools. Before proceeding to the discussion, however, it is important to acknowledge that the study schools offer a diverse range of approaches to student-centered learning. Each study school has its own vision for incorporating SCL approaches into its educational plans, and respondents across all schools agreed there was more work to be done to achieve their goals. Each school has implemented student-centered learning practices in different ways, and some schools appear to be closer to realizing their aspirations than others, but typically respondents described their efforts to adopt and implement SCL approaches as a "work in progress."

Many teachers, principals, and superintendents referred to the complex and often challenging nature of implementing a student-centered learning model and the practices within it. Multiple respondents used the word "messy" to describe SCL at their schools. An administrator at a charter school with high SCL implementation remarked that it takes years for schools to build a strong culture where every teacher embraces and successfully implements SCL practices, and students have seen enough of their peers graduate that they commit to a student-centered education. Another administrator described how teachers' enthusiasm for competency-based learning at his school has diminished over time. He remarked:

> **People jumped on board with the concepts of competency-based learning. But then [we had] to apply them to reality. Teachers' enthusiasm for competency-based learning waned due to the school not having answers [to challenges related to competency-based learning] and not having time to develop answers.**

In the discussion that follows, key findings are bulleted and evidence that supports these findings is presented.



Research Question 1:

What are the characteristics of student-centered practices in relation to the four SCL tenets? How are SCL approaches implemented?

Characteristics of Student-Centered Practices

Key Findings

- Student-centered practices within the *learning is personalized and students take ownership* tenets were the most prevalent within study schools.
- Anytime/anywhere learning practices lag behind the other SCL tenets. Teachers and administrators face an array of challenges to implementing approaches within this tenet and some schools appear not to realize the full educational potential of such practices.
- Schools tended to report that the adoption of competency-based learning (CBE) models is more challenging than implementation of other tenets. Educators and leaders face considerable barriers to successful implementation, such as expectations that students will advance at the end of each school year and community concerns regarding colleges' views of competency-based transcripts.

Tenet 1: Learning Is Personalized

- Interviews and classroom observations revealed that student choice was abundant in study schools, although variations in terms of degree to which and kinds of choice students were offered were apparent. Overall, teachers reported that they have been able to integrate student choice into their curricula with few obstacles. Largely, teachers believed that providing students choice across a range of dimensions (e.g., research topics, work products) fosters student engagement in learning.

- Differentiated instruction, including individualized pacing, an array of classroom and independent assignments, and a range of support people and services, was viewed as means to helping students reach their potential. Leaders and educators reported that these practices require more instructional and planning time than traditional teaching methods.
- Strong student-teacher relationships were the hallmark of several site visit schools. Advisories are a key mechanism for promoting these bonds, although substantial differences exist in the functions and structures of advisories across study schools.

Student Choice and Voice

Personalized learning is grounded in the idea that students should have a voice in their education—that they should be able to make decisions about the topics they study and the means by which they pursue and demonstrate their learning. Student choice was abundant in study schools and it appeared that there were fewer impediments to this aspect of the *learning is personalized* tenet than others, such as differentiated support and individualized pacing.

Within this tenet, a range of curricular and instructional practices were apparent. In some instances, students selected a subject of study from a list or "menu" of options provided by the teacher. In others, curriculum was structured so that students generated their own topics but still worked within a common classroom framework. In others still, students were guided to articulate questions of interest and to determine which learning modes were best adapted to their questions and their preferred learning style.

Classroom discourse similarly reflected a range of approaches to promoting student choice and voice. In some classrooms, discussions were largely teacher-led, albeit with student contributions. In other classrooms, rich discussions were observed, including students asking questions of one another and exploring complex issues related to their particular interests and/or perspectives on real-world problems. At some schools and in some courses, classroom discussions were a regularly "scored" component of the class, and some teachers shared a rubric with the students to let them know how they would be assessed. A few teachers described making a shift from the traditional "debate" model to a "deliberation" model, in which students are encouraged to explore points of view rather than defend or contest them, and these teachers reported that the shift was associated with overall richer discussions and increased student engagement.

Allowing students to choose the medium in which they demonstrate their learning was a fairly widespread practice. Observations revealed, for example, students preparing traditional reports, making videos, presenting to outside community members, and preparing school-wide arts events. In one classroom, a student asked his teacher, "Would it be cool if I made a comic book for my project?" She responded, "This is where you have free reign."

Some educators reflected that the shift toward personalization and deep inquiry-based learning—re-casting their classrooms so that students' questions drive instruction—poses challenges in terms of how to prepare students to assume responsibility for their learning and make progress (e.g., students may flounder if not presented with a menu of assignment choices). As discussed below (p. 15), schools demonstrate a range of approaches to supporting students through this process.

Overall, the study suggests that teachers appear to embrace the practices of providing students a voice and choice in their learning. Largely, teachers expressed that by allowing students to explore their own interests in their academics, they become more engaged in the learning process and are encouraged to pursue their own goals and acquire knowledge and skills in the process.

Differentiated Instruction

Differentiated instruction, including individualized pacing, an array of classroom and independent assignments, and a range of support people and services, was viewed as a means to helping all students reach their potential, although leaders and educators reported that these practices require more instructional and planning time than traditional ("one size fits all") teaching methods.

Overall, teachers and leaders at site visit schools expressed an awareness that their students represented a range of skills, needs, and abilities, and they sought ways to differentiate instruction so as to support each student's growth.

Within classrooms, differentiated pacing was utilized in various ways, and necessarily reflected each school's broader plans and policies regarding students' pathways to learning and demonstrating growth. For example, teachers in the charter schools that embrace competency-based models do not confront a school-wide expectation that all students will cover the same content at the same time, which teachers in more traditional contexts may face. Nonetheless, examples of differentiated pacing were observed at many site visit schools, including the following examples:

- To help students prepare for standardized tests, a mathematics teacher prepares packets of problems addressing each of the skills students would need to master to pass. Students work at their own pace, attempting one packet at a time. When students feel ready, they attempt a quiz that tests their proficiency in that particular area. When they pass that quiz, they move on to the next packet.
- Multiple teachers described using instructional online videos as a way to expand opportunities for students to move through content at their own pace. One technology education instructor said that using videos gives her ELL students the opportunity to review material they may have missed on their first pass. She used Adobe Captivate software to record her computer-based lessons, thus enabling students to play back the lessons at their own pace.

Similarly, teachers at many site visit schools exhibited ways in which they differentiated materials and support for students:

- An English teacher gives students with limited English backgrounds alternate versions of some of the texts she uses in her class.
- At a school with a relatively large high-needs population, it is not uncommon to find a teacher, an intern, and a tutor all in the same classroom coordinating their efforts to provide students with the support they require. The leader commented, "We are almost a Tier II school."

Some educators reflected that differentiation contributes to a sense of equity and fairness across their student populations.

- At one school at which 33 percent of students were English language learners (ELL) and 33 percent had individualized education plans (IEPs), administrators and teachers emphasized the importance of adapting their practices to meet the diverse needs of their students. Explaining the importance of differentiation in settings with students with a broad range of abilities, one teacher remarked, "When you have different types of learners, you have to provide differentiated instruction and multiple versions of assessments because different students are able to give you different things. Everyone getting the same test is not fair, especially when you have kids with IEPs or who are ELL students."
- In classrooms that utilized differentiated pacing, teachers often described a range of impacts on the student experience, focusing not only on students who require additional supports but also in some cases, on stronger students who helped their peers or used extra time to further develop their skills or explore a new topic of interest.

Relative to other tenets, site visit schools demonstrated markedly fewer instances of differentiated support and pacing than opportunities for student choice. In terms of obstacles, teachers sometimes felt burdened by the time required to differentiate their instruction. They described the additional time needed to create multiple versions of assessments or find appropriate texts for students of different reading levels. Additionally, some teachers reported that students sometimes struggled when they were not given deadlines. In response, some teachers provide students with benchmarks and timelines to encourage them to move at a suitable rate. Other respondents expressed that it is harder to provide appropriate levels of support to students when they are working with different materials or at different paces, especially in large classes.

Student-Teacher Relationships and Advisories

Strong bonds between staff and students not only make school a more comfortable, positive experience; they can enhance learning as well. A world language teacher remarked, "In a situation where there is such risk in producing a second language, it is so intimidating for kids. Teachers have to create an environment where kids feel safe and trusted so they can take risks." Other respondents stated that when they trust students, they do not have to be in tight control of them and can allow them to work in an independent fashion. Some teachers expressed that establishing this kind of environment reduced how often they need to discipline students.

At many study schools, teachers and administrators strived to create a positive school culture and strong relationships between all members of the school community. Some teachers and administrators described a feeling of family within their schools, which was facilitated by advisories.

Many study schools had advisory programs, including five of the six site visit schools. Advisories represent an opportunity to foster bonds between students and staff, as well as serve a range of other purposes. Some advisory programs are credit bearing and utilize structured curricula to teach study skills or help students better understand themselves as learners. Others involve less rigor and structure, serving as a home base for students at school for all four years of their high school careers. Advisors working in this model reported that their advisees benefitted from stability, trusting relationships, and a sense of family. Interestingly, the one large school (more than 1,000 students) where a site visit was conducted did not have advisories. Relative to their colleagues at other schools, these teachers spoke less frequently about the importance of student-teacher relationships.

At one study school where administrators and teachers want to improve student attendance rates and there are relatively low levels of parental involvement, teachers rely on their strong relationships with students to boost student achievement. "The effort that I put forth to form and maintain relationships with students," said one teacher, "is on par with the amount of energy I put toward planning and grading students because that piece is the leverage I have as a teacher." In an environment where outreach to parents may not be an effective strategy for improving attendance, strong student-teacher relationships are viewed as especially important. This school also promotes such relationships by training teachers how to relate to and support their students who have had life experiences that are different from their own.

Tenet 2: Learning Is Competency-Based

- Every site visit school implemented a unique competency-based learning system. The lack of a proven competency-based model challenges schools to invent their own approach.
- Many study schools do not report competency-based grades on college transcripts due to fear of community pushback and negatively affecting students' college admission prospects.

- Various constituents hold the expectation that all students will progress to the next grade at the end of the traditional academic year. This expectation reportedly pressures some schools to find ways to advance students who have not demonstrated proficiency in every area of their classes. Accordingly, some teachers contend that some students invest little effort and still progress to the next grade.

Competency-Based Models

Three key findings surfaced regarding competency-based models in study schools. First, the lack of a proven CBE system challenges schools to create their own. Second, many study schools with CBE models have modified them over time. Lastly, schools with high SCL implementation appear to implement their CBE models more consistently than schools with moderate SCL implementation.

There was substantial diversity among the competency-based models in place at study schools. In fact, each of the six site visit schools used a different system for competency-based grading. Overall, educators at these schools reported an apparent lack of proven CBE models, and indicated that they were therefore challenged to develop and implement their own version of a competency-based system. A principal at a traditional school reflected:

> **The journey toward competency-based learning is a nervous journey. We did not know what our competency-based model would look like. Five years later, we now have a vision of what it looks like. No one can get a competency-based learning system right the first time.**

This quote embodies the sentiments of many school and district leaders who struggle to implement competency-based models and determine over time that their systems need modification. At one site visit school, policy recently changed to no longer allow teachers to give students half-points when assessing students on the school's 1–4 competency-based scale. At another site visit school, competency-based grading policies have changed every year for four consecutive years. These changes reflect one way in which SCL is a "work in progress" at study schools.

Another noteworthy finding was the clear contrast between how competency-based systems were implemented at schools with moderate SCL implementation versus schools with high SCL implementation. At two of the schools with moderate SCL implementation, different teachers within the schools implemented competency-based grading in different ways. For example, some used rubrics to describe how assignments would be assessed, but did not allow students to retake summative assessments. Other teachers graded students on a 0–100 scale, but let students take tests multiple times. Additionally, some teachers in the same building used entirely traditional assessment methods. In the end, all teachers had to convert students' grades to an A–F scale, since this was the only way the schools recorded and reported student marks.

The third site visit school with moderate SCL implementation utilized certain components of a competency-based system school-wide, but did not embrace the entire model. At this school, teachers designated some summative assessments for each class "cornerstone assessments." Students needed to score an 80 on every cornerstone assessment to pass the course, and students could retake these assessments as many times as they needed to in order to earn a passing grade. Cornerstone assessments, however, were evaluated on a 0–100 scale, rather than on one measuring competency. Like the other schools with moderate SCL implementation, teachers reported grades to the school on an A–F scale.

All teachers at study schools with high SCL implementation utilized competency-based grading in all of their courses. School leaders created institution-wide expectations that all student assessments be grounded in a CBE system. At these schools, teachers utilized rubrics and evaluated student performance by measuring competency. Students were allowed to resubmit all summative assessments and were not penalized for late work.

Reporting in a Competency-Based System

Reporting grades on report cards and school transcripts is one of the largest concerns when using a CBE model, especially among principals and superintendents. The primary source of apprehension stems from administrators' fears regarding community pushback. The principal of a large, traditional high school remarked:

> **The toughest nut to crack in reference to moving to a purely proficiency-based report card and transcript within a community that tends to be relatively traditional is convincing parents that this is an effective direction to go in. Parents ask, "How will this affect college placement if we move away from a traditional grading system?" How will we edify parents to the degree that they will understand and accept a proficiency-based system?**

These concerns were echoed time and again, especially in schools and districts that send many of their graduates to selective colleges.

The only site visit schools that reported competency-based grades on report cards and transcripts were the two charter schools. Administrators at these schools said they ensure that parents understand students' marks, generally through in-person meetings between parents and teachers or administrators. One school leader identified student-led parent-teacher conferences as a highly effective mechanism to help parents grasp a competency-based grading system.

Interestingly, one site visit school that uses competency-based transcripts and has sent waves of graduates to college reported that it receives only a few phone calls each year with questions about how to interpret the school's transcripts. The guidance office believed that its school's students get into the same colleges, including some selective ones, as they would if the school reported traditional grades.

Data Management and Competency-Based Grades

Overall, study schools struggle with managing student data and recording competency-based grades. All four study schools with high SCL implementation have had to either create their own software for recording grades, modify the coding of a pre-existing program, or work with software that was still in development. One school writes down student marks by hand in some instances. Each of these pathways has burdened schools.

Individualized Pacing and Competency-Based Learning

At the heart of competency-based learning models is the idea that students complete work at their own pace. In turn, they advance in their studies upon demonstrating mastery of relevant competencies and core knowledge, rather than according to age or seat time requirements. A primary goal of this approach is to increase rigor and prevent students from moving ahead with gaps in their skills, knowledge, or understanding of relevant content. In this way, CBE aims to eradicate the phenomenon known as "Swiss cheese achievement."[6]

Individualized pacing is used to some degree in classrooms at all site visit schools. In site visit schools with high SCL implementation, differentiated pacing is reportedly utilized in every class, as students work at their own pace to achieve competencies. The apparent ubiquity of this practice reflects a school-wide commitment to CBE. In site visit schools with moderate SCL implementation, individualized pacing is implemented intermittently as teachers generally carry it out at their discretion.

Differentiated pacing not only applies to the rate at which students complete coursework within a class, but also to the process through which students advance from one course

[6] http://www.competencyworks.org/wp-content/uploads/2014/01/CW-Progress-and-Proficiency-January-2014.pdf.

or grade to the next. Interviewees in site visit schools suggested that while differentiation may occur in classrooms, certain conventional structures actually conflict with a core component of CBE. That is, interviewees indicated that the use of a traditional school calendar and formal grade levels (in place at five of the six site visit schools), for example, reinforces the expectation that students will advance to the subsequent grade at the end of every school year rather than according to demonstrated mastery. The principal of one school that uses competency-based grading and has a conventional school calendar in place remarked:

> **Proficiency-based grading is about truly moving a student to proficiency and the idea that this can take longer for some than others. What we haven't done a good job [at] is having a conversation that [acknowledges that] some students may need more than four years of high school.**

Administrators at the one site visit school that does not use grade levels or follow a traditional calendar decided not to use these practices in an attempt to diminish the expectation that students move at a certain pace. At this school, there are no class years or sequential courses (English I, English II, etc.). Instead, students attend the school year round (with 3-week breaks after every 10-week term) and labels like "freshman" and "senior" do not exist. Rather than complete classes in a successive fashion, students enroll in "learning studios" which cover an array of topics and provide students the opportunity to demonstrate competency in various knowledge areas.

Accountability in a Competency-Based Model

The three site visit schools with CBE models in place face challenges regarding advancing students based on mastery, staff support of competency-based learning, and student engagement and attendance.

As mentioned above, some schools struggle with an expectation held by an array of constituents that students will advance to the next grade at the end of each school year. As a result, some teachers and administrators at study schools feel pressured to find ways to advance students every June, even if students have not demonstrated proficiency in all areas. "Once [our school does] away with grade level, we will be fine," said a teacher at a school with a CBE model in place. "But we're still a round peg in a square hole. Students are still advised by grade level. They are still expected to graduate in four years [and] move up with their grade." Teachers stated that this expectation encourages staff and administrators to find ways to deem students proficient so they can stay with their class and avoid repeating coursework. At multiple schools, teachers described pressure from parents and administrators to find ways to keep students moving from one grade to the next, even when students have not met class requirements. Additionally, some teachers reported a school-wide reluctance to allow students to experience failure. "People are afraid to let these kids fail and the kids know it," stated a respondent. One study school that uses a CBE model does not hold students accountable for demonstrating proficiency in all competencies to pass a class. At this school, students receive a score on each competency ranging from 1–4, with 3 representing proficient. In order to receive credit for a course, however, students only need to average a 2.5 in the course's competencies. As a result, more students receive credit at the end of each year and are able to advance to the next grade than would otherwise do so if held to a standard of 3 in all competencies.

On a related note, some staff expressed frustration that students were not being held accountable for their decisions or poor performance. "When we assign homework, students don't do it, and that's okay," remarked one teacher. Her colleague echoed this sentiment, remarking, "We can't even get students to do classwork a lot of the time." Some teachers at this school described how students often wait until an assignment is due and then request a "late plan" from their teachers, knowing that there is no penalty for needing extra time to complete work. Some students reportedly do not follow through on this plan, leading to the development of subsequent solutions. Teachers were vexed

by having to spend extra time helping students who continued to put off assignments. Some felt that competency-based learning was antithetical to the goal of helping students develop strong time management skills.

Attendance is also a problem for some schools using CBE models. An administrator at one such school described that before they shifted to a competency-based model, students did not receive credit for a class if they missed more than eight times in a term. He explained, "In the competency-based model, attendance doesn't matter and the kids have figured this out pretty quickly." He said he and his colleagues work hard to look for early signs of absenteeism, striving to mitigate the problem before it becomes too severe.

Competency-Based Learning and Student Ownership

Disparate perspectives on competency-based learning and how it relates to student ownership make it a divisive matter in some schools. Many teachers and administrators agreed that CBE fosters students' ownership of their learning. One administrator expressed that practices such as using rubrics and allowing students to choose how to demonstrate mastery, "unpack the guts of learning and [engage] kids in understanding the process of learning."

A tension exists, however, as some respondents perceive value in competency-based instruction, but reported that some students do not demonstrate the skills or disposition required to succeed in a CBE system. Teachers said that such students prefer to be told what to do, struggle with the lack of deadlines and flexibility regarding work products, and do not value understanding how they are assessed. One administrator expressed this dilemma as follows:

> **For some students, competency-based learning is great. They have the opportunity to choose how they are going to show their mastery of a concept. If they don't want to write an essay or take a test, they can go to their teacher with an alternative approach. But for other kids, they can't handle that. There isn't enough structure. They need handholding along the way. They need clear expectations. Sometimes the flexibility and choice presents some students with a challenge.**

Students are taking ownership of their learning because they know what models of good and bad work are. It's no longer a hidden curriculum. There are visible models and descriptive feedback on how to improve. So we're seeing students being active participants in their learning.

– A superintendant

Tenet 3: Learning Takes Place Anytime, Anywhere

- Site visit schools demonstrate fewer instances of anytime/anywhere learning relative to the other three SCL tenets.
- "Place-based" learning experiences are more prevalent in site visit schools than credit-bearing opportunities that students can pursue at any time.
- An array of anytime/anywhere learning experiences are in place at study schools with both high and moderate SCL implementation, although they are more prevalent at schools with high implementation. Additionally, some schools appear not to realize the full educational potential of such practices.
- Numerous barriers exist to anytime/anywhere experiences, such as establishing community partnerships, transportation, and budget.

Characteristics of Anytime/Anywhere Learning

All six site visit schools provided students with opportunities for "place-based" learning, where students leave school premises to engage in structured credit-bearing experiences. In many instances, these schools often took advantage of opportunities in their surrounding communities. For example, a school located near a large Hispanic community required students in a high-level Spanish class to complete an immersive week-long experience. Rural schools utilized nearby farms and nature preserves to pursue hands-on learning opportunities, while urban schools required students to complete job shadows and internships with local businesses. Some schools also travel substantial distances with groups of students to pursue educational opportunities in environments that contrast with the schools' settings. For example, at one rural site visit school, a mathematics teacher takes students to an amusement park, where they ride and complete worksheets on roller coasters. At this same school, teachers from three subject areas come together every year to plan their curricula around a four-night interdisciplinary expedition that takes the entire 11th grade on a three-hour drive to New York City. Once there, students conduct field work to learn about eugenics, heredity, and other salient topics. This school's principal commented on the importance of this activity, saying, "Teaching our kids out in the world and bringing the world into our building is at the core of what we believe makes for good learning."

There were key ways, however, in which site visit schools appeared not to fully capitalize on learning opportunities that bring students beyond school walls. For example, one school takes small groups of students and staff on international trips, but students are not eligible to receive credit for this experience. At another school, students must complete 60 hours of community service, but they are not required to reflect or report on their experiences. These were both schools with moderate SCL implementation. In general, such schools exhibited markedly fewer and less substantial anytime/anywhere learning experiences than schools with high implementation.

Many site visit schools also failed to realize the full potential of anytime/anywhere learning experiences by not providing students with robust opportunities to earn credits on their own time. Although several site visit schools allowed students to complete online classes, offerings were generally limited to world languages not taught in the school. While taking computer-based courses gives students the opportunity to complete coursework at home and free up time in school to pursue other endeavors, most site visit school schedules were not structured to accommodate this arrangement. Some schools allowed students to earn credit for attending a conference or similar activities that were not formally related to the school. This practice, however, was not in place at any of the site visit schools with moderate SCL implementation. Lastly, although numerous site visit schools had 1:1 digital device policies, interviews and observations revealed that many educators primarily used devices to enhance communication, collaboration, and access to information, rather than transform the time, place, and ways in which students pursued credit-bearing educational endeavors.

Challenges to Anytime/Anywhere Learning

Relative to the other SCL tenets, there were markedly fewer initiatives in place in study schools that fall into the category of anytime/anywhere learning. Anytime/anywhere practices may lag behind other student-centered practices because of an array of obstacles that impede their implementation, many of which relate to time and scheduling. Administrators at schools without block scheduling spoke to the difficulty of students participating in off-campus learning experiences during the school day. Short class periods do not allow students enough time to leave campus, have a productive educational experience, and return to school in time for their next class. In this way, block scheduling creates a more favorable environment for anywhere/anytime learning.

Three other challenges to anytime/anywhere learning include the amount of time it takes to build relationships with community partners, student availability, and transportation. Respondents expressed that it takes time and dedication to establish opportunities for students to conduct internships or service learning projects. At a study school where

90 percent of students receive free and reduced lunch, an administrator explained that many students have to work after school to make money for their families. This interferes with students' ability to participate in a range of afterschool endeavors. With respect to transportation, rural and urban administrators alike found securing funds to support students' movement from school or home to their required off-site location a challenge. A principal at a rural school, for example, identified the challenge of paying for buses to bring students into the community. A principal of an urban school cast the issue in terms of equity in access. This principal found that while dual enrollment or internship options could be established administratively, many students had no convenient way to travel to these sites and public transportation was cost prohibitive to many students. In response, the principal allocated specific budget resources in order to provide $1 bus passes to students.

Tenet 4: Students Take Ownership

- To foster student ownership, study schools utilize an array of pedagogical strategies, opportunities for student involvement in school governance and policy formation, assessments of 21st-century skills, and philosophies of student empowerment.
- Some educators observe that students become increasingly successful in a student-centered environment as they grow to accept the challenges and benefits of owning their learning.

Characteristics of Student Ownership

Study schools utilized a broad array of practices to foster student ownership over their learning. The following approaches were used at multiple study schools: student presentations, student-led parent-teacher conferences, peer tutoring, the workshop model, passages, restorative practices for handling disciplinary matters, and providing students with opportunities to reflect on their work, development, and learning styles. Some site visit schools engaged in less common practices, such as student-led IEP meetings and student-taught enrichment classes. Respondents expressed that these practices promoted essential skills and habits, like perseverance, goal setting, planning, interpersonal skills, self-efficacy, and responsibility. Numerous site visit schools assessed traits such as these and other 21st-century skills.

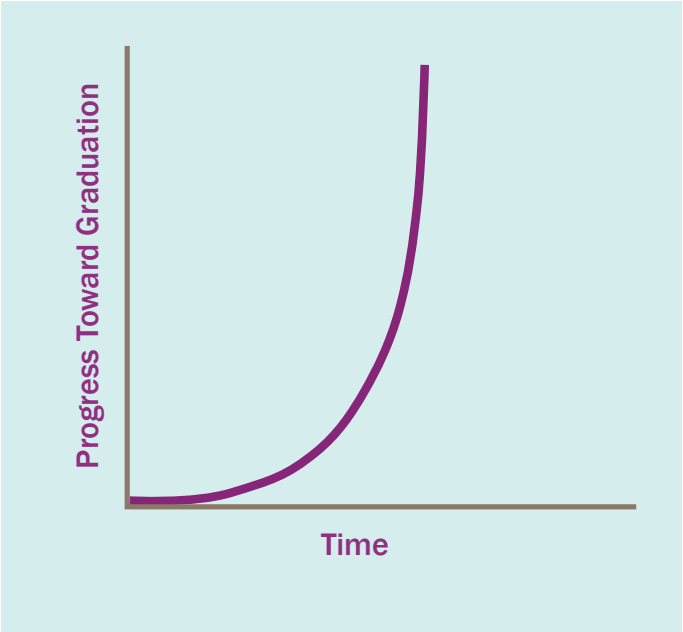
At several study schools, student ownership was also emphasized beyond the classroom through student participation in school governance. In these schools, students made up the majority of voting bodies, co-chaired various school committees, participated in hiring teachers and administrators, and had a voice in determining course offerings. Administrators at these schools expressed the belief that fostering student voice in these ways empowered students, provided them with learning opportunities, and contributed to students' perceived connection to their schools.

Many respondents agreed that some students were more comfortable taking ownership of their learning than others. Administrators at one study school subscribe to the theory presented in Nancy Mohr's "Stages of Student Empowerment."[7] Mohr asserts that students pass through certain stages over time as they participate in a student-centered education. Her model posits that students initially experience a "honeymoon" as they rejoice in their perceived freedom, but that this phase is quickly followed by feelings of resistance, anxiety, and distrust. Eventually, students discover "genuine empowerment" as they embrace the advantages and challenges of owning their learning.

Administrators in this same school have seen many students exhibit low levels of productivity early in their academic careers as they have grappled with the challenges presented by ownership of their learning. Once students have progressed through Mohr's model and developed the above skills and attitudes relating to student ownership, they complete work and progress toward graduation at a much faster rate. Educators at this school referred to this phenomenon as the "J curve" (see Figure 1 below).

[7] http://webiva-downton.s3.amazonaws.com/342/9e/f/4472/MC2_NH_NESSC15_Handouts.pdf

Figure 1. The J Curve



Challenges of Student Ownership

Across site visit schools, teachers and administrators reported that some students are well-equipped to assume responsibility for their learning while others are not. Typically, descriptions of students' challenging responses to student-centered learning opportunities included disengagement (e.g., pursuing distractions such as playing on electronic devices) and/or an expectation or request that teachers lead students through learning activities. Accordingly, classroom observations revealed a range of interactions between students, and between students and teachers.[8] In some classrooms, students quietly pursued individual project work with apparent focus and deliberation and little interaction with a teacher. In other classrooms, students appeared to move productively through their work, occasionally checking in with the teacher or other students for reassurance, clarification or suggestions. Students who exhibited less self-direction were prone to socializing, using phones and computers for tasks seemingly unrelated to the work at hand, and relying substantially on the teacher (e.g., some students appeared unable to proceed without teacher assistance when they encountered confusion).

Teachers expressed varying views on the challenges inherent in promoting student ownership. Some teachers highlighted students' reluctance to take initiative. One teacher commented, for example, "If you want students to explore something, you have to walk them through the exploration. They'll do it, but they won't always take initiative to create something. That's where [student-centered] learning can be a challenge, in that most students want to be led." Other teachers viewed the challenges in terms of their own role and the complexities inherent in encouraging less self-directed students to focus on their work. These teachers feared that the students would react negatively if nudged too hard, perhaps resisting the notion of concentrating on school, in both the short and long term.

[8] Please note that it is important to not draw undue conclusions regarding the prevalence of certain kinds of student behavior based on relatively brief classroom observations.

Strategies to Promote Student Ownership

Largely, two sets of frequently overlapping approaches to enhance students' ability to exercise ownership of their learning were apparent across study schools: explicit instructional and pedagogical strategies within classrooms and coursework, and a pervasive commitment to a growth mindset.

Across classroom observations, individual teachers displayed varying efforts to foster student self-efficacy and peer support. Examples include pointing students toward helpful online resources, encouraging a class to ask questions of particular students, and conversations built around questions designed to help students clarify their understanding and unpack their confusion. Also, teachers employed a range of different tools and processes to help students move through various stages of work. Examples include project-planning and goal-setting worksheets, structured check-ins between students or between students and teachers, task- and timeline-planning tools, and self-reflection tools. In different ways, these tools and processes are intended to reinforce students' ability to work effectively while pursuing learning grounded in their own interests.

A lot of our students come from very traditional school settings where they haven't had as much choice and voice. It takes a while for them to take that leap. It can be astounding to see how much people can get accomplished once they are fully invested. It's not work anymore. It's doing what you love.

– A teacher

More broadly, some study schools reflected a strong school-wide growth mindset. For example, at some schools, the work habits of students are formally assessed. Three site visit schools assess students in areas such as the impact of their behavior on the community, their self-directedness, and their ability to meet deadlines. Measuring student performance in these areas sends a message to students that their school expects them to make progress with these competencies and gives teachers an opportunity to dialogue with students who are not meeting expectations. Notably, at the one site visit school that uses competency-based grading but does not measure students' 21st-century skills, some teachers reported being irritated by student disengagement. These teachers wanted more tools at their disposal to encourage students to buy into their educations.

Similarly, some schools espoused a student empowerment philosophy. For example, instead of reprimanding students who demonstrate undesirable behavior, some teachers communicate to students that staff believe in their ability to improve and that teachers will support their progress toward self-regulation. An advisor at one study school explained to a student that he needed to spend enrichment time in a particular room in order to catch up on certain content. The student complained that he would not be allowed to listen to music on his headphones if he worked in that space and that would hurt his productivity. The teacher's one-word response let him know that she believed in him and his ability to overcome this obstacle: "Grit."

Finally, some schools acknowledged that students may come to them without having been exposed to opportunities to develop the requisite skills and predilection necessary for self-regulation. These schools anticipate a time investment in preparing students in this way.

The discussion now turns to the second part of Research Question 1, an examination of how student-centered approaches are implemented in study schools and other related findings.

Implementation of Student-Centered Practices

Teaching in a Student-Centered Environment

- Respondents across site visit schools typically expressed that teaching in a student-centered classroom requires more planning and preparation than in a traditional setting.
- Content is often covered at a slower pace in a student-centered environment than in a more traditional one. As a result, some teachers opt to use traditional approaches at times in an attempt to address all the material that is expected to be covered in Advanced Placement courses or tested on PARCC, Smarter Balanced, or statewide exams such as MCAS.
- Many interviewees said that teaching in a student-centered environment requires staff to become familiar with new instructional practices and reconceive their role as teachers.
- Mathematics is perceived to pose challenges to implementing SCL approaches due to its sequential nature. Teachers of courses that have project-based curricula (e.g., arts) reported more readily embedding SCL practices in their classes.

Time and Teaching in a Student-Centered Environment

A common perspective among teachers at study schools was that instructing in a student-centered environment requires more planning and preparation than teaching in a traditional pedagogical setting. Teachers differentiate lesson plans and resources, proactively address places where weaker students might struggle, and generate ideas for how stronger students will spend their time once they have finished certain tasks in an individually paced learning environment. Teachers also invest energy in creating rubrics for assessments, seeking innovative ways to promote student ownership, finding authentic resources, and making connections with community partners so students can extend their learning beyond school walls.

Although teaching in a student-centered environment may require a great deal of time and dedication, many teachers expressed that working in such an atmosphere is exceptionally rewarding. "Teaching at this school fills me up," stated a teacher at a school with high SCL implementation. "It fills the other teachers up to engage our students in such relevant, hands-on learning." Overall, interviewees indicated that the advantages of teaching in a school that prioritizes SCL outweighs the drawbacks.

Content Covered More Slowly with SCL Practices

Numerous teachers described that relative to conventional instruction, their classes cover content more slowly when student-centered practices are in place. "We need to give students the time to be quiet, to struggle, to be confused, and to start to feel comfortable with the confusion," remarked a respondent.

> *You can't believe how hard teachers work here. Especially coming from another school, practically none of the teachers I worked with before would ever make it here because you have to be adaptable. You stay until four or five o'clock every day. I am so impressed how hard our teachers work.*
>
> *– An administrator*

Challenges reportedly arise when statewide or regional testing programs or Advanced Placement exams push teachers to explore certain content in their courses. One teacher remarked, "AP is an obstacle to student-centered learning. [These courses] are not on the same planet." Like many of her colleagues, she felt pressure to minimize the role of SCL approaches and utilize traditional teaching methods in her classes in order to cover the material on which her students would be tested. Many instructors of AP classes made this point. Less commonly, some teachers reported that standardized tests such as PARCC, SBAC and MCAS exert pressure on teachers to cover a certain prescribed curricular scope. Interestingly, some teachers described creative strategies to manage this tension. Some teachers, for example, use SCL practices to help students prepare for these exams, while an AP calculus instructor explained that he uses the weeks between the AP test and the end of the school year to cover the material for standardized tests.

Teacher Professional Growth and SCL

Another challenge facing some teachers working in classrooms or schools that use student-centered practices is the need to become familiar with novel pedagogical methods—methods they may not have been exposed to during their schooling or in previous positions. Overall, teachers reported that student-centered learning requires them to expand their repertoire of professional skills, and that the process cannot be accomplished quickly or easily. One teacher remarked, for example, "We have been trained in traditional teaching methods. Making the switch to student-centered learning is not just a matter of saying, 'Next year I'm going to do student-centered, and I'm done.' There's an ongoing process over years [after] making the switch." Another teacher commented, "You need to have a very good toolbox to use with students when you're going to personalize teaching. It takes time to build up that toolbox." Other teachers observed that a number of supports have contributed to their professional growth, including targeted professional development, common planning time, mentoring relationships, reviews of research and literature, attendance at professional conferences, and the opportunity to teach the same class for several years. "The real trick is helping our staff, who have never learned this way, figure out how to translate their content knowledge to a different way of working with kids," remarked one school administrator.

Given the time-intensive nature of teachers' shift toward student-centered approaches, staff turnover can be particularly detrimental to a school's evolution. The investment in teacher growth is lost when staff leave the building, and the need to retrain may arise with the arrival of new staff. An administrator at a school with high implementation remarked that he and his colleagues "have to bring new staff up to speed every year." This includes orienting them to competency-based learning, helping them establish rubrics for assessing student performance, guiding them toward creating learning opportunities that permeate school walls, and teaching them ways to personalize their curriculum and promote student ownership.

In addition to the need to acquire new skills sets, some interviewees reflected that their conceptualization of the teacher's role had evolved in tandem with their continued exposure to student-centered learning approaches. Typically, they reported having adjusted their understanding of the teaching role such that they modeled for their students qualities such as open-mindedness, flexibility, humility, and willingness to learn. Some teachers described challenging themselves to discard the notion that they were experts who held all the answers, and instead worked to create situations in which students took ownership of the learning and posed important questions for teachers and students to pursue together. One teacher commented, "There's a certain presumption that when you're the teacher, you're in front and you have to be teaching .... A lot of people are held back by that impression that they have to be in charge all of the time. But it's not about what the teacher is doing. It's about what the students are doing."

Student-Centered Learning by Subject Area

Teachers in different fields offered various perspectives on how their implementation of SCL practices was shaped by their subject area. In general, mathematics teachers expressed that the sequential nature of the subject was a barrier to utilizing SCL approaches. One teacher said, for example, "In history you can jump from the Industrial Revolution to World War II because the baseline there is you can read and analyze text. But if you went from solving two-step equations to solving the quadratic equation, that's a jump that a lot of kids couldn't make." This limits the freedom and flexibility that mathematics teachers have and makes it harder for them to open the subject up to student interests.

Meanwhile, several instructors of art, wood technology, and landscape architecture courses described the facility with which they implement SCL practices. These respondents said that the project-based nature of their classes was compatible with rubric-driven assessment. They also allowed students to pursue projects that matched their interests and often evaluated students based on how much they progressed during the course.

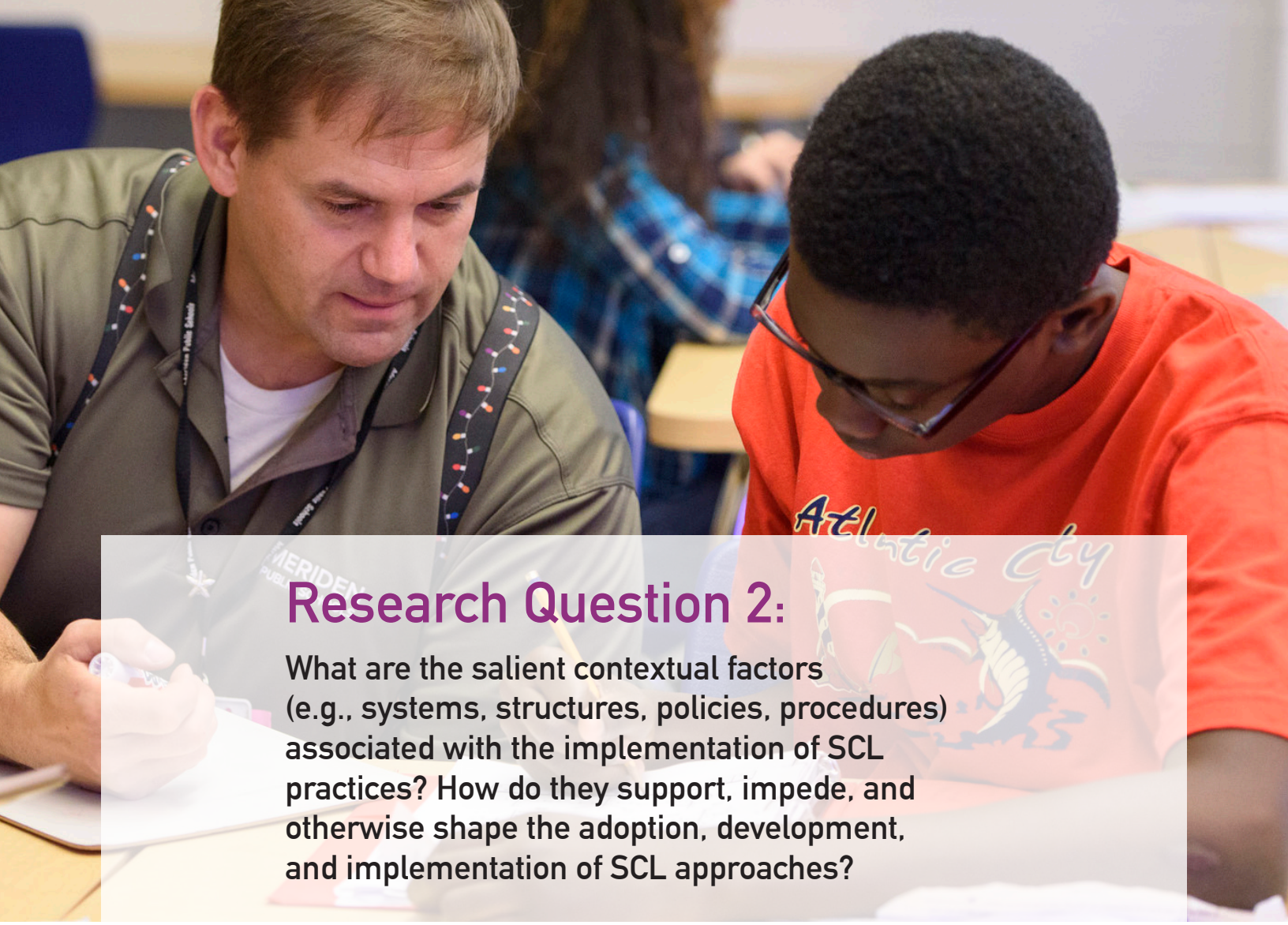
There were no other clear trends in other subject areas in regard to the ease or challenge of implementing student-centered practices. In some schools, world languages and science were at the forefront of personalization and ownership, while the humanities lagged. At other schools, it was exactly the opposite.

Technology and Student-Centered Learning

- Technology may increase the opportunities for student-centered learning, but it appears that not all study schools take full advantage of the technology at their disposal.

The availability of technology may expand the potential of student-centered learning, as many teachers use digital devices and other high-tech resources to increase personalization, individualized pacing, and student ownership. Study schools use a variety of ways to put technology in students' hands, including school-wide 1:1 digital device policies and laptop carts that teachers can sign out for a period. In these schools, some teachers used technology to allow students to research their own topics of interest on their individual devices. Some instructors use pedagogical practices, like an "electronic fishbowl," during which a handful of students debate a topic while their classmates listen in. The classmates add to the conversation by posting comments to a chatroom, which is projected onto a screen for everyone in the class to see. Some study schools did not benefit from a comparable prevalence of technology, which may have restricted the student-centered activities teachers were able to implement.

Although technology can be used to foster SCL, there is not necessarily an association between the prevalence of digital devices and student-centered approaches. As noted above in the discussion of anytime/anywhere learning practices (p. 12), some study schools with 1:1 digital device policies appeared not to capitalize on the full potential of such technologies to promote SCL practices.



Research Question 2:

What are the salient contextual factors (e.g., systems, structures, policies, procedures) associated with the implementation of SCL practices? How do they support, impede, and otherwise shape the adoption, development, and implementation of SCL approaches?

Contextual Factors Shaping SCL Practices

Key Findings

- Study charter schools face fewer obstacles to implementing robust SCL practices relative to traditional high schools. In general, study charter schools had more student-centered approaches in place than the other schools in the study.
- Some administrators, teachers, and parents at traditional study schools exhibit resistance and concern regarding student-centered approaches—a barrier to the adoption and development of SCL practices.
- Two study schools utilized school turnaround initiatives as an opportunity to grow their student-centered practices and direct school culture toward a vision of SCL.
- Traditional study schools implemented student-centered practices at different rates. Schools that slowly adopted SCL approaches exhibited relatively few student-centered practices at the time of data collection, while schools that quickly adopted SCL approaches experienced more challenges.

SCL Implementation at Charter Schools

- Study charter schools were founded on missions that reflect all four of the student-centered learning tenets. These schools deviate from conventional educational practices to focus on SCL and look to embed student-centered practices within and beyond the classroom.

Each of the four charter schools in the study was founded during the past 13 years with a mission that stresses SCL tenets. Overall, study charter schools utilized competency-based systems for assessing students in all classes, strived to expand student learning beyond school walls, and developed school culture around student ownership and personalization. Teachers at these schools are expected to utilize robust SCL approaches and receive clear messages to this effect from administrators, colleagues, and the school mission and culture. Accordingly a greater degree of consistency was observed between the student-centered practices used within study charter schools relative to traditional schools. As mentioned earlier, anytime/anywhere learning lagged behind other tenets at study schools, but practices within this tenet were far more prominent at charter schools than others. These schools did not have to transition from a traditional model of education or pre-existing school cultures, staffs, practices, or policies, which gave them an important advantage in implementing SCL practices relative to traditional schools in the study.

Charter schools do face challenges, however, that do not confront traditional schools. Study charter schools are leaders in many ways with regard to their robust implementation of SCL practices. Therefore, there are very few schools they can turn to for advice regarding successful adoption and development of student-centered approaches. “A lot of our practices are in front of a wave that’s happening, so there’s not a lot of other schools to look at with the practices we’re using,” remarked an administrator. Multiple principals of study charter schools also reported that their schools struggled when they first opened due to the lack of a strong school culture. Namely, some students exhibited limited productivity and behavioral issues, which discouraged teachers from utilizing SCL approaches. For example, at one study school, a principal remarked that she and her colleagues were afraid to take students on community-based learning projects, which is an essential part of the school’s mission, because some students demonstrated patterns of violent and illegal behavior. “If we had had a strong school culture at that time, which takes years to build,” she commented, “we would have been able to advance our students further more quickly. We couldn’t be the community-based school we wanted to be.” Another administrator expressed that one reason newly opened schools struggle is because younger students do not have older peers who have been successful in the school after whom they can model their behavior. Another obstacle that is unique to charter schools is the need to maintain healthy enrollment levels, since their budgets are directly tied to the number of students served. This pressure typically drives charter schools to direct resources toward marketing and recruitment—resources which could otherwise support teaching and learning.

While questions pertaining to school leaders’ approaches to hiring and retaining staff could not be fully explored within the scope of this study, leaders of some charter schools described an explicit effort to attract and hire teachers who would be well suited to the demands of the job. They reportedly seek out candidates who are either familiar with SCL practices and/or demonstrate an orientation toward student-centered instruction and an openness to novel pedagogical methods. One study charter school principal described, for example, an interest in teacher candidates who are “pioneers… people who are flexible,” adding that she is not interested in “someone who has been doing the same thing for a long time.” Additionally, the principal attempts to adequately prepare candidates to be aware of the many roles they will be asked to assume. To this end, the principal prepares a “scary job description,” explaining her desire to discourage applications from individuals who are not a good fit for the role. Further, teaching candidates at this school participate in an intensive hiring process, replete with multiple interviews and demonstrations of teaching methods.

SCL Implementation at Traditional Schools

- Some administrators, teachers, and parents at traditional study schools demonstrate resistance and concern regarding SCL approaches, which serves as an impediment to the expansion of student-centered practices.
- Two study schools utilized school turnaround initiatives as an opportunity to grow their student-centered practices.
- Traditional study schools implemented student-centered practices at different rates. Schools that implemented approaches slowly exhibited fewer SCL practices at the time of data collection. Schools that quickly adopted SCL approaches faced barriers in regards to competency-based systems and frustration among some staff members.

Overview of SCL at Traditional Study Schools

Seven of the eight traditional high schools in the study exhibited moderate SCL implementation. Interviews and observations suggest that SCL implementation at these schools was uneven, varying by teacher and classroom. For example, some teachers at these schools used competency-based grading and some did not. Some teachers stressed student ownership, some focused on personalization, and some relied on traditional teaching methods. It is notable that the research team reviewed some lesson plans at traditional schools that were substantially more student-centered than some lesson plans at charter schools, and that some lessons observed at charter schools were taught in a relatively conventional way.

Administrators at many traditional schools did not express concern that different teachers implemented various SCL practices while others used conventional instructional methods. Rather, these school leaders celebrated student learning and growth, irrespective of the pedagogies used to foster it. At these schools, administrators reportedly utilized structures and strategies like common planning time and targeted professional development to nudge teachers toward student-centered approaches, but did not mandate the school-wide implementation of such practices.

Barriers to SCL Implementation

In contrast to study charter schools, all of the traditional high schools in the study operated for decades in conventional educational frameworks before beginning to embrace student-centered practices. Unlike charter schools, these institutions transitioned from one educational model to the other—not an easy feat by any means, according to many school leaders.

Respondents at every traditional site visit school expressed that shifting toward a vision of student-centered learning prompted pushback from an array of constituents. Numerous study principals commented that parents would worry about their children's college prospects if the school reported replaced A–F grades on transcripts with competency-based scores. One principal said, when nearby selective colleges start accepting competency-based transcripts, "then I will start making a push for them. But we don't want to disadvantage our kids for college acceptance." Another school administrator remarked that there is a general resistance toward the kinds of changes that come with the adoption of student-centered practices. Describing a job shadow program that has been in place in his school for 20 years, this respondent said, "People [support the program] because it's what we've been doing for 20 years. I find it interesting because if we didn't have the job shadow program here and we said 'Let's start a three-day job shadow,' I feel like it would never get off the ground. People would put up barriers and roadblocks." This quote highlights the challenging nature of implementing new SCL practices in a conventional context where students, teachers, administrators, and community members expect teaching and learning to follow historical precedent.

School Turnaround as an Opportunity to Expand SCL

Two study schools had been recognized as historically underperforming and were mandated to participate in school turnaround initiatives in the past few years. At both of these schools, administrators utilized the opportunity to recast the schools' reputation and adopt a vision grounded in a commitment to delivering quality educational services for all students. While their school redesign trajectories differed from one another in terms of timing and specific reforms, both schools adopted a student-centered framework and used the autonomies and other features of turnaround to expand the breadth and depth of SCL implementation. For example, both schools modified their schedules to create opportunities for common planning time and student enrichment. They utilized professional development to promote new instructional frameworks that promoted student ownership. Further, they used the staff replacement and rehiring mechanisms inherent in school redesign with the explicit intent to add faculty with knowledge, skills, and attitudes that align with student-centered learning.

Rate of Implementation

Slower is faster. If you take the time to [implement student-centered practices] thoughtfully, they will stay.

– A principal

Some of the traditional schools in this study have implemented student-centered learning models very quickly, while others have done so at a slower pace. The slow approach was taken by most of the traditional study schools. Some administrators at schools that took this path spoke to how they exposed their faculty to ideas related to student-centered learning through professional development. Over time, teachers became increasingly supportive of related practices and began using them in their classrooms, although some of their colleagues chose to stick with more traditional pedagogical methods.

Other traditional study schools took the approach of implementing student-centered practices more rapidly. "It was like quickly ripping the Band-Aid off," stated one school leader. Transitions like these used a top-down approach, where school- and/or district-level administrators led a rapid, sweeping shift toward a student-centered model or particular tenets, such as competency-based learning. While such transitions generally promoted broader adoption of student-centered practices than slow shifts to SCL, respondents said that fast transitions can create problems with aligning teachers' understanding of and enthusiasm for SCL approaches. "People jumped on board with the concepts of competency-based learning," remarked a study principal that made a fast transition to proficiency-based learning. He continued, "But then you have to apply these concepts to reality. Teachers' enthusiasm for proficiency-based learning waned due to the school not having answers [to challenges related to competency-based learning] and not having time to develop answers." At another school that quickly implemented a competency-based system, teachers were frustrated that the school did not have adequate plans in place for holding students accountable.

Too many people try to implement competency-based learning in a revolutionary way with a light-switch approach. We have the battle scars to show that that's not a good approach.

– A superintendent

Impact of District and State on SCL

- The study found that state- and district-level policies, specifically with respect to student learning progressions, pathways, and assessment may create opportunities for schools to expand or deepen their SCL approaches.
- Interviewees suggested that granting schools autonomy can foster SCL, while the introduction of competing priorities may divert attention away from SCL and slow the implementation of student-centered practices.

District

Interviewees suggested that school districts can function in ways that promote or impede the implementation of SCL practices in schools. In some study schools, the district was acknowledged as the driving force behind a shift toward student-centered approaches. For example, in some districts, the superintendent's office led a transition to a competency-based model and delegated responsibility for the development of the other tenets to school staff. Representatives of some schools reported that the district promoted SCL by granting budgeting, hiring, and teacher evaluation autonomy. This autonomy was present in districts where there was trust between school- and district-level leaders.

By contrast, interviewees suggested that districts can impede the adoption of SCL approaches. With respect to autonomy, for example, one study school proposed that grades below a C- would be counted as failure, but its district did not sign off on this policy. Some districts have also reportedly crafted policies that are antithetical to SCL. For example, one district banned in-class cell phone use, posing challenges to teachers who want their ELL students to be able to use their devices when they encounter unfamiliar words.

State

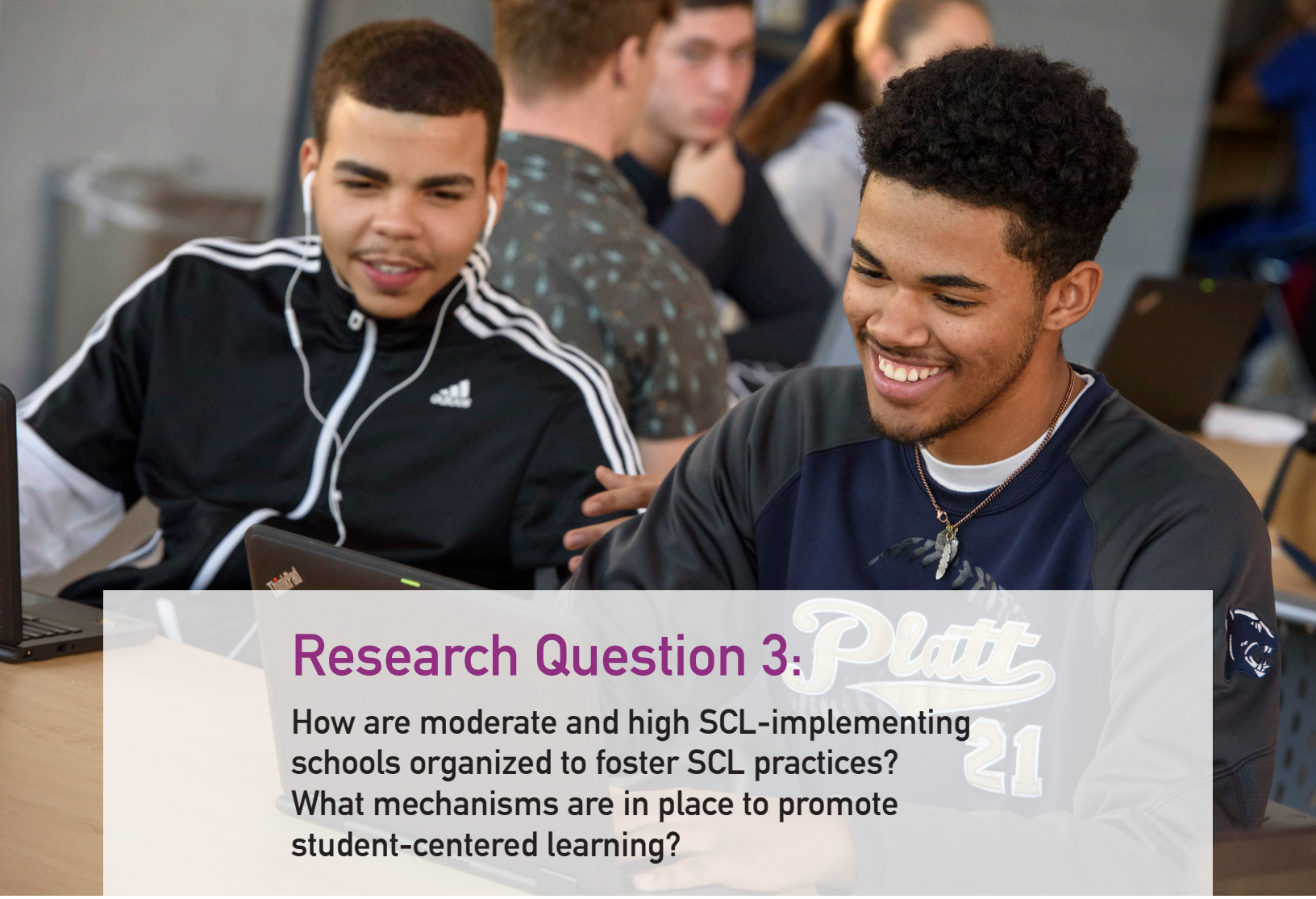
The study found that states, similarly, can also shape the educational landscape in ways that have a positive or negative impact on student-centered learning in schools. Specifically, they can enact legislation and policies that affect student learning progressions, assessment, or other functions related to teaching and learning. For example, Vermont recently passed legislation that will require all schools to create personalized learning plans and flexible pathways to graduation for its students. Maine and Rhode Island mandate that all graduates demonstrate proficiency in an array of standards. One study principal said that policies like these "give schools an opportunity to be more focused on competency-based measures to evidence student growth and learning."

But the study found that states can also obstruct SCL. They can do so by imposing competing priorities that shift schools' focus away from student-centered learning. One leader of a charter school described the expanding emphasis that Rhode Island has placed on test scores. "We have had to invest a lot in our state assessment scores," she said, "because the future of our school depends on them .... If your scores are not where the state thinks they should be, your charter could be revoked." A principal in Maine said that while he is pleased that the state is supporting schools' transition to a competency-based model, the mandate to assess standards came in the same year as a change in teacher evaluation models. Simultaneously presenting schools with both of these changes reportedly made it hard for the school to do either particularly well.

School Size and SCL

Of the four tenets of student-centered learning, the size of study schools appears to be most closely associated with learning is personalized. Specifically, teachers, overall, reported having stronger relationships with their students at small schools. One teacher who had previously worked at a bigger school said, "I feel more connected to these students [than students at my old school]. I will remember every one of these students. I [only] remember some of my students from my previous school." Teachers at small site visit schools reported interacting with and talking about every one of their students with colleagues every week. As mentioned above, teachers at the one large site visit school appeared to place less emphasis on student-teacher relationships.

The study suggests a possible relationship between school size and the role of student voice in study schools as well. Two of the three study schools that reportedly incorporate the most student input into decisions that affect the school have fewer than 500 students. An administrator at one such school remarked, "We don't have layers of administration. I think that lends itself to student-centered learning and [student voice] because students are so close to the people who are making decisions, whether it's at the school level or even at the district level."



Research Question 3:

How are moderate and high SCL-implementing schools organized to foster SCL practices? What mechanisms are in place to promote student-centered learning?

School Organization

Schedule

- Successful implementation of SCL approaches is often influenced by scheduling practices, which can promote or impede student-centered learning across all four SCL tenets.

"Your schedule is your destiny." These words spoken by a study school principal reflect the critical impact that a school's schedule has on its ability to implement student-centered approaches. Study participants reported that scheduling is related to all of the SCL tenets.

Several site visit schools use schedules with flexible periods during which students can pursue enrichment activities of their choosing or select an assignment on which to work, as well as where to work on it. This practice promotes student ownership and personalization of their learning. Teachers can also assign students to come to their classrooms during these times to catch up on missed competencies. Additionally, block schedules support anywhere learning, as students have adequate time to leave and return to school during a long period. One study school devotes two entire days of the week for students to pursue internships, enabling students to spend substantial amounts of time learning outside of the school. As mentioned earlier, one study school's year-round calendar facilitates its implementation of a CBE model (p. 10). Lastly, scheduling also plays a large role in creating opportunities for staff to collaborate and share ideas, as is discussed in the subsequent section.

Staffing Structures

- The strategic use of staffing structures plays a critical role in fostering student-centered practices within study schools.
- At some schools, common planning time, distributed leadership, instructional coaches, and professional development reportedly improve student-centered pedagogical methods and direct school culture toward SCL.
- Some study schools have expanded their student-centered approaches through partnerships with external organizations.

Some teachers at site visit schools, including teachers who had instructed in an environment with high implementation for several years, expressed a desire to improve their student-centered teaching practices. These respondents reflected that they benefitted from exposure to new ideas as well as opportunities to share best practices and troubleshoot with colleagues. Common planning time, distributed leadership, targeted professional development, and external partnerships were identified as effective school structures, associated with teachers' growth in the realm of student-centered learning and the alignment of SCL practices across instructors within schools.

Common Planning Time

Across site visit schools, teachers typically identified common planning time as a critical support to successful instruction in a student-centered environment. They remarked that the allocation of time to collaborate with colleagues afforded opportunities to deepen and broaden their expertise within the new educational paradigm. Across the spectrum of veteran and more junior teaching staff, interviewees emphasized the value of professional exchange that is made possible through collaborative problem-solving. Teachers newer to the profession and more senior colleagues reported that the process of working through specific student-centered practices together (e.g., devising rubrics that may be used in multiple classrooms) yielded substantial learning. Additionally, teachers valued the opportunity to focus specifically on real-life experiences with students in their classrooms and asserted that their students benefitted from the collective reflection of staff. More pragmatically, teachers found that the allocation of time to meet and plan together was essential to the implementation of learning experiences that transcend typical teaching structures (e.g., interdisciplinary projects). Similarly, teachers used this time to ensure the consistency of students' experiences across classrooms by, for example, comparing one another's evaluation of student work on a proficiency-based scale.

Common planning time is what saves new teachers.

– A teacher

Some administrators echoed teachers' sentiments that the time allocated for common planning yields important returns. For example, one administrator commented, "[Common planning time] gives faculty a much better understanding of the work being done in the school. It gives them an opportunity to problem solve. And it gives them an opportunity for general support."

I don't think you can have student-centered learning unless you have teaching that is collaborative.

– A teacher

Some study schools recognized the importance of common planning time and have reworked their schedules to create daily opportunities for teachers to come together and plan. Not every study school, however, has the common planning time that staff desire. One study school with moderate implementation gives teachers only 40 minutes per week, and the school board rejected the school's recent request to expand this time. "It doesn't seem like enough [time]," commented the superintendent.

Distributed Leadership

Site visit schools use additional tactics that help foster faculty alignment and exchange of ideas between staff in various school units. One such approach is the use of "mega-departments," where, instead of a department head for every subject area, there is one chair for all of the science, technology, engineering, and mathematics units, one for the humanities, and one for wellness. These school leaders are responsible for representing a broad array of interests and reporting information to many parties. Each mega-department meets regularly, as do discipline-specific groups, which resemble traditional department meetings. A superintendent said that the high school in his district uses such a model and, as a result, they "broker a lot more conversations across departments." Another principal of a school with mega-departments spoke about the tremendous amount of "cross-pollination" of ideas that occurs in his school and how it is common for teachers to have strong relationships with colleagues outside of their academic area.

Additionally, four site visit schools utilize instructional coaches to promote student-centered practices throughout the faculty. The structure of the role and attendant responsibilities vary across schools. Specifically, instructional coaches at some schools have no teaching responsibilities. At others, teachers are appointed to terms as instructional coaches, during which they reduce their teaching load to create time for supporting their colleagues. School leaders demonstrate a commitment to student-centered learning by using instructional coaches. A principal described coaches in his school in the following way: "They work individually with teachers and help provide professional development so their colleagues understand proficiency-based grading, understand restorative practices, understand and have help devising authentic assessments, and develop strong rubrics for students."

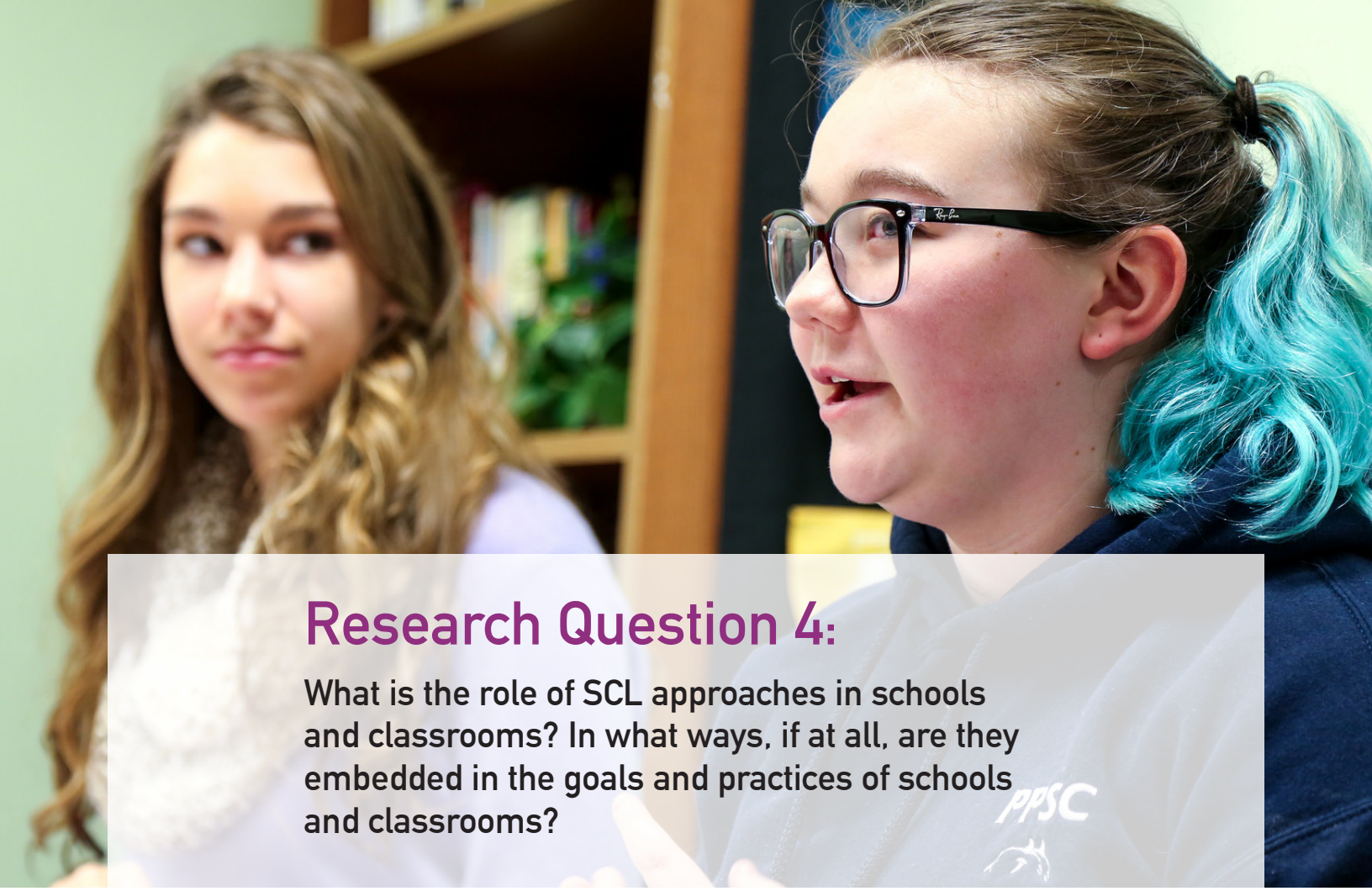
Targeted Professional Development

Along with common planning time and instructional coaches, teachers and administrators who were interviewed typically viewed professional development as critical for establishing an orientation among all faculty toward SCL and helping teachers hone their pedagogical methods. Many study schools offer robust professional development on topics that align with the SCL tenets. Topics include inquiry-based learning, personalized learning, proficiency-based models, and the workshop model of instruction. Across study sites, some teachers felt professional development aided their implementation of SCL approaches, and some schools created opportunities for teachers to provide input into the topics of future professional development sessions. Numerous teachers also reported that attendance at conferences outside their school and district introduced them to new student-centered practices, which they brought back to their classrooms and colleagues.

External Partnerships

A number of study schools utilize partnerships with a range of external agencies to foster SCL practices. These partnerships play a critical role in promoting various SCL tenets at the school and/or classroom level. Two study sites belong to the network of Expeditionary Learning schools, which provides guidance to shape schools' curriculum, instruction, assessment, leadership, culture, and character in ways that are aligned with the SCL tenets. By closely adhering to the Expeditionary Learning model, the schools in the study have implemented robust SCL practices across all four tenets and have become widely recognized as regional leaders in the realm of student-centered learning. Another study school has partnered with the Reinventing Schools Coalition, which is similar to Expeditionary Learning in that it provides training and professional development. The Reinventing Schools Coalition's programs, however, focus on competency-based learning.

One site visit school that serves a high-needs population relies on numerous partnerships to enhance its student-centered practices and address student needs. Tutors and interns who are engaged in service and graduate programs are prevalent throughout the building, providing extra scaffolding and support to students. The school partners with numerous local colleges to forge dual enrollment opportunities for students. One agency teaches an enrichment course in which students create their own businesses and develop their skills as entrepreneurs is an environment that places tremendous emphasis on student ownership. Finally, this school, as well as others, has benefitted from creating relationships with other schools and sending a team to visit them in order to learn about ways to enhance teaching and learning.



Research Question 4:

What is the role of SCL approaches in schools and classrooms? In what ways, if at all, are they embedded in the goals and practices of schools and classrooms?

The Role of SCL Practices in Study Schools

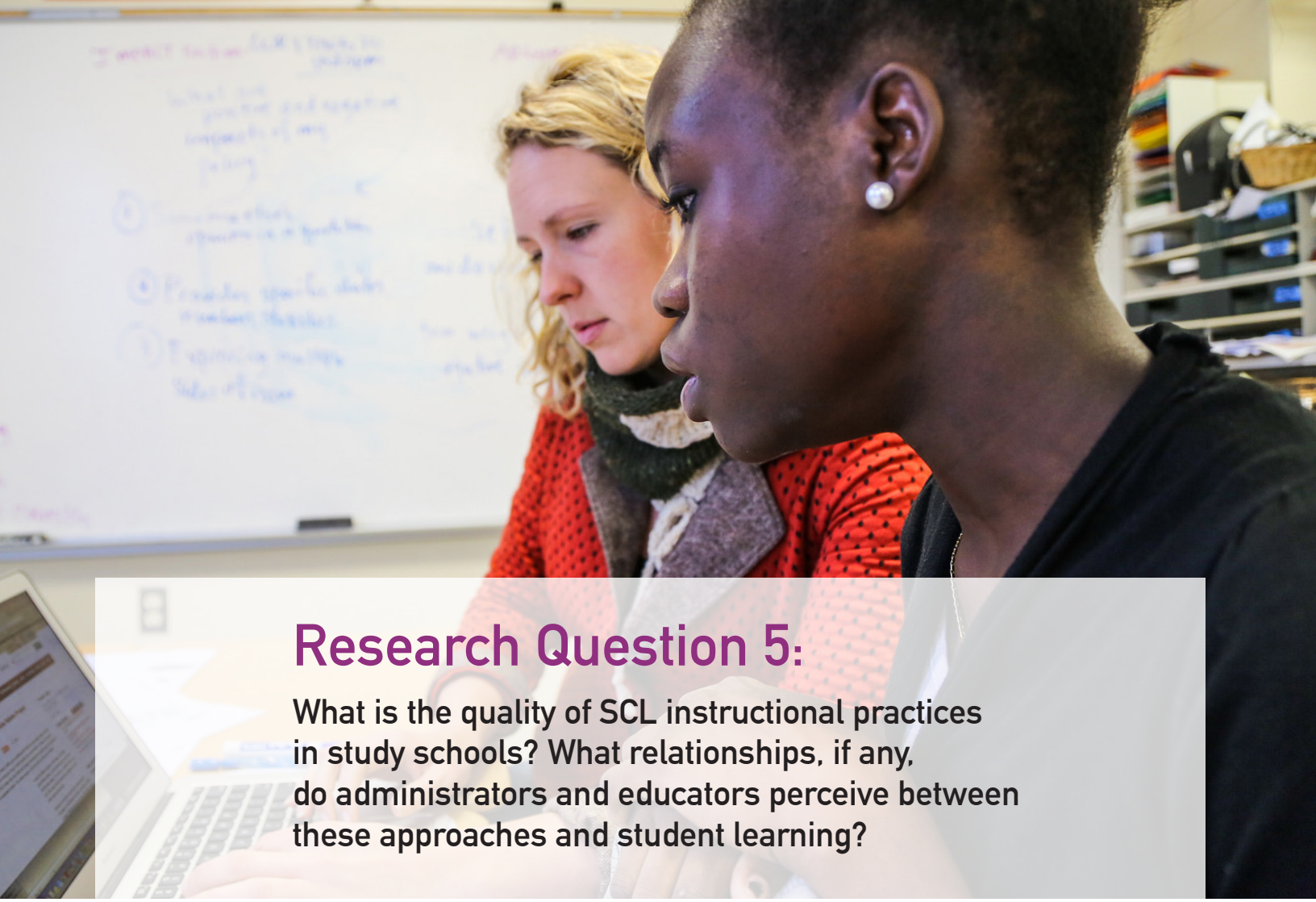
Study Schools Aspire to Teach More than Content

- Overall, teachers and administrators in study schools demonstrated a desire to produce learners with strong 21st-century skills, who are empowered to pursue their own interests and successes, and who are engaged in their communities.
- Some study schools exhibited an explicit orientation toward social justice. They address social and political issues such as privilege and representation in their curricula, and view their school community as a model for the establishment of equitable relationships and open, authentic communication.

Across study schools, teachers and administrators expressed a desire to extend teaching beyond content-driven objectives. They strived to help their students reach their full potential, not just as students, but as fully informed and contributing members of society (e.g., as citizens, voters, consumers of media). As mentioned above, several schools measured students' 21st-century skills, but even those that did not recognized the importance of preparing individuals who were ready for all aspects of life, not just post-secondary education. Schools described efforts to foster traits such as self-efficacy, empathy, perseverance, integrity, self-awareness, and critical thinking. Student-centered practices in support of this purpose included teachers' efforts to build strong, trusting relationships with students; in some cases, teachers indicated that students rely on a sense of trust and turn to their instructors for guidance regarding matters both within and beyond the classroom. Additionally, some instructors promote norms of cooperation across all their classrooms, explicitly inviting students to embrace confusion as a natural part of the learning process and encouraging them to rely on their peers for support.

Reaching outward, some schools have crafted internships and other community-based experiences with an explicit eye toward reciprocity—not only enhancing the student's learning experience but also seeking to maximize the resources that a school could offer to its surrounding community.

Some study schools also demonstrated a commitment to social justice and the advancement of a more equitable division of power both within the school and its community, and more broadly. These goals are reflected in mechanisms such as school missions as well as institutionalized curriculum and professional development efforts. For example, one school routinely delivers a unit on "The Code," designed to sharpen students' critical thinking skills by exploring unconscious biases evident in works of literature and mainstream discussion of current events. At some other schools, teachers include global issues in their course of study (e.g., international nuclear power policies). Further, the study found that professional development can also be a vehicle to promote social justice values. In one study school where staff and students come from vastly different backgrounds (i.e., staff are largely white and from middle socio-economic status, and the student population is largely of color, and of lower socio-economic status), administrators lead workshops for new teachers designed to provide them with knowledge and skills they may not possess because of their lived experience. The principal stated that her goal in working with her staff is, in part, "to teach young, white teachers how to have relationships with people who are strange to you." In terms of specific skills, professional development reportedly covers topics such as the role of race in grading, the effects of poverty on learning, and how to support students who have experienced trauma, racism or other forms of oppression. At yet another school, the principal described various changes as the racial and economic diversity of the school increased. Her guiding principle was to foster understanding and shared leadership among students from an array of backgrounds. As one example, the principal reported that the school's annual trip to New York City provides the urban students of color—typically the minority at school—the opportunity to be viewed as leaders by their peers who are less comfortable in an urban setting.



Research Question 5:

What is the quality of SCL instructional practices in study schools? What relationships, if any, do administrators and educators perceive between these approaches and student learning?

Perceived Impacts of Student-Centered Practices on Students

SCL Approaches may Boost Engagement and Contribute to Deep Learning

- Study respondents largely asserted that student-centered learning practices promote student engagement and facilitate learning that is relevant to students. At the same time, some educators fear that not all students are held accountable for their learning, especially in competency-based systems.
- Participants widely acknowledged that SCL approaches require more time to learn than traditional methods. Accordingly, some study participants reported that teachers in SCL environments cover less content than those in traditional settings. Participants who support SCL contend that students in student-centered environments explore curriculum with more depth, develop more important skills through those processes, and retain knowledge more effectively than in traditional settings.

Many teachers and administrators maintained that students exposed to SCL practices demonstrate more engagement in their learning than they would if exposed to more traditional teaching strategies. These educators found that students are more focused on their work when it is relevant to them—when they make critical decisions about what to learn and how to learn it. Acknowledging that teachers may cover less curriculum

content in an SCL environment than in a traditional setting, some respondents asserted that such approaches increase students' depth of understanding and their ability to retain information. Teachers reported that their students remember the projects they complete and the information they learn in the process because of the connection they have to topics they pursue.

Digging deeper, some teachers reported that students who have not experienced success in traditional settings have benefitted from SCL approaches. One respondent remarked, for example, that with student-centered practices in place, previously disengaged "students are moving around, and they're awake and alert." Alternatively, several respondents felt that competency-based approaches created opportunities for students who may not possess requisite self-regulatory skills to disengage from their academics. These respondents cited, for example, policies that favor open-ended timeframes for submission and resubmission of student work as well as a lack of penalties for school absences.

Study schools have had mixed experiences with respect to student performance as measured on standardized tests. Educators at a few study schools affirmed that the use of SCL approaches has boosted students' scores on standardized tests. One principal, for example, believes that student writing has improved as a result of teachers' adoption of a competency-based assessment system. This respondent felt that through the use of rubrics and performance standards, teachers have been able to help students understand the key elements of good writing. In schools that have not demonstrated improved test scores, interviews largely revealed two key themes: frustration that teachers' and students' efforts are not reflected in scores, and recognition that student-centered approaches prioritize deeper learning which is not necessarily compatible with the goals and measures encapsulated in standardized tests.

Conclusion

Across study schools, student-centered learning is portrayed as a work in progress. Teachers and administrators described multiple challenges, each school has a unique vision for incorporating SCL, and no school reports having realized all its goals.

Analysis revealed that approaches within some SCL tenets were more prevalent than others. Overall, practices within the realms of personalized learning and student ownership are more common in study schools relative to anytime/anywhere and competency-based learning approaches. The anytime/anywhere and competency-based tenets may be less widespread due to the numerous barriers that impede their adoption and development.

Various challenges and supports are associated with each SCL tenet and practices within each tenet play a different role across study schools. Within *learning is personalized*, practices that foster student choice and voice are more established than differentiated instruction and individualized pacing. Also, many respondents emphasize student-teacher relationships as they strive to create a sense of family and trust within their schools. There are apparently more barriers surrounding competency-based learning than the other tenets, including recording and reporting student grades, holding students accountable in a CBE framework, and the lack of a proven competency-based model that schools can adopt. Although every site visit school had some anytime/anywhere learning practices in place, a variety of impediments stand in the way of implementing such approaches and not all schools capitalize on the educational potential of learning experiences that take place beyond school walls or allow students to make academic progress on their own time. Lastly, student ownership plays a critical role in students' ability

to succeed in a student-centered environment. Schools encourage students to exert ownership over their learning in a variety of ways. Once students do so, they become increasingly able to capitalize on their education.

Respondents across site visit schools addressed important ways that instruction in a student-centered environment contrasts with traditional teaching. Key differences include SCL instruction requiring teachers to spend more time planning and preparing, becoming familiar with new pedagogical methods, and reconceiving their role.

Traditional study schools have encountered more obstacles to implementing robust SCL approaches than charter schools. While charter schools opened with strong commitment to SCL and student-centered practices in place in every classroom, traditional schools have had to transition to a student-centered model. Along the way, they have dealt with barriers, including an array of school constituents who are often resistant to novel educational methods.

Study schools are organized in ways to promote the implementation of SCL practices. Respondents expressed that nontraditional schedules and calendars aid schools in developing effective SCL approaches. Additionally, staffing structures such as common planning time and distributed leadership expose staff to new ideas and help them implement student-centered approaches.

In general, study schools demonstrated an interest in producing learners with strong 21st-century skills. Additionally, schools aspired to empower students to pursue their own interests and encouraged them to engage in their communities. Some study schools also articulated an explicit orientation toward social justice, addressing political and social issues such as privilege and representation in their curricula.

There was consensus among many study participants that SCL practices foster student engagement and facilitate learning that is relevant to students. Although instructing with student-centered approaches requires more learning time according to respondents, some educators asserted that such practices foster the development of important skills and knowledge.

Looking ahead, further expansion of SCL across the region may hinge on how policy makers, school leaders, community members, and external agencies work together to diminish barriers and enhance supports to student-centered learning practices.

Strategic Considerations

NMEF aims to foster student-centered approaches in high schools across New England. This study suggests that several potential strategies to accomplishing this goal may warrant consideration.

The study's key message is that SCL is widely acknowledged to be a work in progress. Schools follow various trajectories in the process of adopting and implementing SCL approaches, but no school reported having accomplished all of its goals in this regard. The study suggests that educators are eager to learn from their colleagues in the field. Further efforts to understand the rich diversity of experiences and identify barriers, supports, and promising solutions may yield important lessons for schools and districts.

Instructional practices at charter schools merit closer investigation. The charter model might represent a unique opportunity to expand the role of SCL practices in public education, and efforts to foster dialogue between professionals associated with charter and traditional schools may produce rich insights and expansion of student-centered approaches in both contexts.

School and district leaders in multiple states remarked that state policies have been a catalyst in pushing them to adopt new student-centered practices. In this light, continued and expanded dissemination of supportive policies may help to normalize progressive pedagogical methods, in turn fostering acceptance of these practices among a broad range of constituents. Additionally, strengthened communication between legislators

and school leaders may reinforce each party's understanding of the salient policy and practical considerations that drive decisions. For example, some respondents indicated a need to help state leaders understand that schools experience challenges when legislators simultaneously change policy on multiple fronts.

While progress has been achieved in some aspects of SCL implementation, findings suggest that concerns prevail regarding competency-based learning systems. In particular, some study schools and parents are afraid that reporting competency-based grades to colleges may adversely affect students' prospects in the college admissions process. In fact, numerous principals expressed reluctance to implement CBE grading systems because of pushback from parents, or even the fear of such resistance. The study suggests that in order for CBE practices to gain traction in New England public high schools, parents will need to understand and support them, and colleges must allay concerns that competency-based report cards will work against students in the admissions process. Promoting broad dialogue between colleges and high schools using competency-based grades may increase understanding for all parties, and may prompt colleges to articulate more clearly how they interpret competency-based transcripts.

The shift to CBE poses real data management challenges to several study schools, which have struggled to record competency-based grades. Respondents referred to shortcomings in the systems they use and the lack of a proven software program that readily supports their needs. The development of such a program could potentially benefit schools that are already using a CBE approach and could remove a substantial barrier for others that are considering the transition to competency-based grading.

Finally, numerous study schools have expanded their SCL approaches through partnering with external agencies that bring in expertise regarding student-centered practices. Identifying a multitude of organizations that successfully help schools implement robust SCL approaches and encouraging partnerships between these agencies and schools may promote growth of student-centered practices across the region.

nellie mae EDUCATION FOUNDATION

The Nellie Mae Education Foundation is the largest philanthropic organization in New England that focuses exclusively on education. The Foundation supports the promotion and integration of student-centered approaches to learning at the high school level across New England—where learning is personalized; learning is competency-based; learning takes place anytime, anywhere; and students exert ownership over their own learning. To elevate student-centered approaches, the Foundation utilizes a four-part strategy that focuses on: building educator ownership, understanding and capacity; advancing quality and rigor of SCL practices; developing effective systems designs; and building public understanding and demand. Since 1998, the Foundation has distributed over $210 million in grants.

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